GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: June 25, 2003, 14:20:41 ; Search time 31.5 Seconds
(without alignments)
444.169 Million cell updates/sec

Title: US-09-622-613B-13
Perfect score: 582
Sequence: 1 MSDWLTFQKKHLTNTRDVDC.....TFCVTCENQAPVHFVGVGHC 105

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
1: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
3: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
4: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
5: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
6: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
7: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*
8: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:*
9: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
10: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:*
11: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:*
12: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*
13: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*
14: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*
15: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*
16: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1995.DAT:*
17: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1996.DAT:*
18: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*
19: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1998.DAT:*
20: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*
21: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:*
22: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
23: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	582	100.0	105	20	AAY28871	Recombinant Met(-1
2	578	99.3	105	20	AAY28867	Recombinant Met(-1
3	577	99.1	104	20	AAY28870	Recombinant RaPLR1
4	575	98.8	105	20	AAY28869	Recombinant Met(-1
5	573	98.5	104	20	AAY28865	Rana pipiens liver
6	573	98.5	127	20	AAY28879	Rana pipiens Clone
7	570	97.9	104	20	AAY28866	Recombinant RaPLR1
8	560	96.2	112	18	AAW35118	R. pipiens recombi
9	560	96.2	251	18	AAW35134	R. pipiens recombi
10	560	96.2	254	18	AAW35135	R. pipiens recombi
11	560	96.2	355	18	AAW35129	R. pipiens recombi
12	560	96.2	355	18	AAW35133	R. pipiens recombi
13	560	96.2	366	18	AAW35132	R. pipiens recombi
14	556	95.5	104	18	AAW06544	Antitumour protein
15	556	95.5	105	18	AAW35123	R. pipiens recombi
16	556	95.5	355	18	AAW35125	R. pipiens recombi
17	556	95.5	358	18	AAW35130	R. pipiens recombi
18	555	95.4	105	18	AAW35116	R. pipiens recombi
19	553	95.0	105	20	AAY39400	Recombinant frog O
20	551	94.7	104	12	AAR12344	Protein with activ
21	551	94.7	104	15	AAR47303	ONCONASE (pharmace
22	551	94.7	104	17	AAW00736	Protein derived fr
23	551	94.7	104	18	AAW30301	Recombinant onc pr
24	551	94.7	104	18	AAW06543	Antitumour protein
25	551	94.7	104	18	AAW14065	Onconase (RTM) pro
26	551	94.7	104	20	AAY33322	Frog onconase prot
27	551	94.7	104	20	AAW88233	Rana pipiens RNase
28	551	94.7	104	22	AAB31666	Amino acid sequenc
29	551	94.7	106	18	AAW35122	R. pipiens recombi
30	551	94.7	107	18	AAW35117	R. pipiens recombi
31	551	94.7	358	18	AAW35127	R. pipiens recombi
32	551	94.7	365	18	AAW35131	R. pipiens recombi
33	551	94.7	379	18	AAW35126	R. pipiens recombi
34	549	94.3	105	18	AAW35115	R. pipiens recombi
35	548	94.2	104	18	AAW30302	Recombinant onc pr
36	546	93.8	104	18	AAW18224	Antitumour generic
37	543	93.3	104	22	AAB31667	Amino acid sequenc
38	532	91.4	107	18	AAW35120	R. pipiens recombi
39	499	85.7	360	18	AAW35128	R. pipiens recombi
40	484.5	83.2	111	18	AAW35121	R. pipiens recombi
41	445	76.5	83	18	AAW35119	R. pipiens clone R
42	445	76.5	83	20	AAW88234	Rana pipiens RNase
43	287	49.3	111	20	AAY33321	Frog lectin protei
44	285.5	49.1	111	20	AAY28878	Recombinant Met(-1
45	281.5	48.4	111	20	AAY28873	Recombinant Met(-1

ALIGNMENTS

RESULT 1
AAY28871
ID AAY28871 standard; Protein; 105 AA.
XX
AC AAY28871;
XX
DT 25-JAN-2000 (first entry)
XX
DE Recombinant Met(-1) RaPLR1 Gln1Ser amino acid sequence.
XX
KW Recombinant Met(-1) Rana pipiens ribonuclease Gln1Ser; RaPLR1; CD22;
KW covalently bound; LL2 antibody; ligand binding moiety; cancerous B cell;
KW Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
KW autoimmune disease; RNase.
XX
OS Rana pipiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 1
FT /note= "Met not found in wild type RaPLR1"
FT Misc-difference 2
FT /note= "Wild type Gln replaced with Ser"
XX
PN WO9950398-A2.
XX
PD 07-OCT-1999.
XX
PF 26-MAR-1999; 99WO-US06641.
XX
PR 27-MAR-1998; 98US-0079751.
XX

PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Newton DL, Rybak SM;
XX
DR WPI; 1999-610847/52.
DR N-PSDB; AAZ08129.
XX
PT New recombinant ribonucleases, used for killing target cells, e.g. for
PT treating cancers, viral infections or autoimmune diseases -
XX
PS Claim 34; Page 61; 71pp; English.
XX
CC The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC protein with Met at position 1 and Gln2Ser. Carboxy terminal end of
CC recombinant RaPLR1 has a covalently bound ligand binding moiety, which
CC can be a LL2 antibody directed against CD22 on cancerous B cells or human
CC chorionic gonadotrophin (hCG) effective against Kaposi's sarcoma cells.
CC Recombinant ribonucleases can be expressed in bacteria without an N-
CC terminal methionine due to the presence of a signal peptide that is
CC cleaved by bacteria. The soluble expression of ribonuclease allows the
CC proteins to be fused in-frame with ligand binding moieties to form
CC cytotoxic fusion proteins. They can be used for treatment of cancer and
CC autoimmune diseases.
XX
SQ Sequence 105 AA;

Query Match 100.0%; Score 582; DB 20; Length 105;
Best Local Similarity 100.0%; Pred. No. 1.1e-62;
Matches 105; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||||
Db         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
```

RESULT 2
AAY28867
ID AAY28867 standard; Protein; 105 AA.
XX
AC AAY28867;
XX
DT 25-JAN-2000 (first entry)
XX
DE Recombinant Met(-1) RaPLR1.
XX
KW Recombinant Met(-1) Rana pipiens ribonuclease; RaPLR1; CD22; RNase;
KW covalently bound; LL2 antibody; ligand binding moiety; cancerous B cell;
KW Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
KW autoimmune disease.
XX
OS Rana pipiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 1
FT /note= "Met not found in wild type RaPLR1"
XX
PN WO9950398-A2.
XX
PD 07-OCT-1999.
XX
PF 26-MAR-1999; 99WO-US06641.
XX
PR 27-MAR-1998; 98US-0079751.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Newton DL, Rybak SM;
XX
DR WPI; 1999-610847/52.
DR N-PSDB; AAZ08126.
XX
PT New recombinant ribonucleases, used for killing target cells, e.g. for
PT treating cancers, viral infections or autoimmune diseases -
XX
PS Claim 34; Page 57; 71pp; English.
XX
CC The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC protein with Met at position 1. Carboxy terminal end of recombinant
CC RaPLR1 has a covalently bound ligand binding moiety, which can be a LL2
CC antibody directed against CD22 on cancerous B cells or human chorionic
CC gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
CC ribonucleases can be expressed in bacteria without an N-terminal
CC methionine due to the presence of a signal peptide that is cleaved by
CC bacteria. The soluble expression of ribonuclease allows the proteins to
CC be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC proteins. They can be used for treatment of cancer and autoimmune
CC diseases.
XX
SQ Sequence 105 AA;

Query Match 99.3%; Score 578; DB 20; Length 105;
Best Local Similarity 99.0%; Pred. No. 3.4e-62;
Matches 104; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              | |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MQDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||||
Db         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
```

RESULT 3
AAY28870
ID AAY28870 standard; Protein; 104 AA.
XX
AC AAY28870;
XX
DT 25-JAN-2000 (first entry)
XX
DE Recombinant RaPLR1 Gln1Ser amino acid sequence.
XX
KW Recombinant Rana pipiens ribonuclease; RaPLR1 Gln1Ser; covalently bound;
KW LL2 antibody; ligand binding moiety; CD22; cancerous B cell; frog;
KW Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW recombinant ribonuclease; cytotoxic fusion protein; cancer; RNase;
KW autoimmune disease.
XX
OS Rana pipiens.
OS Synthetic.
XX
FH Key Location/Qualifiers
FT Misc-difference 1
FT /note= "Wild type Gln replaced with Ser"
XX
PN WO9950398-A2.
XX
PD 07-OCT-1999.
XX
PF 26-MAR-1999; 99WO-US06641.
XX
PR 27-MAR-1998; 98US-0079751.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Newton DL, Rybak SM;
XX
DR WPI; 1999-610847/52.
DR N-PSDB; AAZ08128.

```
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 34; Page 60; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC   protein with Gln1Ser. Carboxy terminal end of recombinant RaPLR1 has a
CC   covalently bound ligand binding moiety, which can be a LL2 antibody
CC   directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
SQ   Sequence   104 AA;

  Query Match             99.1%;  Score 577;  DB 20;  Length 104;
  Best Local Similarity   100.0%;  Pred. No. 4.4e-62;
  Matches  104;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          2 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 61
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 SDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTT 60

Qy         62 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||||
Db         61 SEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104


RESULT 4
AAY28869
ID   AAY28869 standard; Protein; 105 AA.
XX
AC   AAY28869;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Recombinant Met(-1) RaPLR1 Met23Leu-(His)6 protein.
XX
KW   Recombinant Met(-1) Rana pipiens ribonuclease Met23Leu-(His)6; RaPLR1;
KW   CD22; covalently bound; LL2 antibody; ligand binding moiety; RNase;
KW   cancerous B cell; Kaposi's sarcoma; human chorionic gonadotrophin; hCG;
KW   signal peptide; recombinant ribonuclease; cytotoxic fusion protein;
KW   cancer; frog; autoimmune disease.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 1
FT                   /note= "(His)6 histidine tag attached to N-terminal Met"
FT   Misc-difference 1
FT                   /note= "Met not found in wild type RaPLR1"
FT   Misc-difference 24
FT                   /note= "Wild type Met replaced with Leu"
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08127.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 4; Page 59; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease protein
CC   (RaPLR1) with Met at position 1 attached to (His)6 tag and Met24Leu.
CC   Carboxy terminal end of recombinant RaPLR1 has a covalently bound ligand
CC   binding moiety, which can be a LL2 antibody directed against CD22 on
CC   cancerous B cells or human chorionic gonadotrophin (hCG) effective
CC   against Kaposi's sarcoma cells. Recombinant ribonucleases can be
CC   expressed in bacteria without an N-terminal methionine due to the
CC   presence of a signal peptide that is cleaved by bacteria. The soluble
CC   expression of ribonuclease allows the proteins to be fused in-frame with
CC   ligand binding moieties to form cytotoxic fusion proteins. They can be
CC   used for treatment of cancer and autoimmune diseases.
XX
SQ   Sequence   105 AA;

  Query Match             98.8%;  Score 575;  DB 20;  Length 105;
  Best Local Similarity   98.1%;  Pred. No. 7.8e-62;
  Matches  103;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              | |||||||||||||||||||:|||||||||||||||||||||||||||||||||||||
Db          1 MQDWLTFQKKHLTNTRDVDCNNILSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||||
Db         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105


RESULT 5
AAY28865
ID   AAY28865 standard; Protein; 104 AA.
XX
AC   AAY28865;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Rana pipiens liver ribonuclease (RaPLR1).
XX
KW   Rana pipiens liver ribonuclease; RaPLR1; covalently bound; LL2 antibody;
KW   ligand binding moiety; CD22; cancerous B cell; Kaposi's Sarcoma; frog;
KW   human chorionic gonadotrophin; hCG; recombinant ribonuclease; RNase;
KW   signal peptide; cytotoxic fusion protein; cancer; autoimmune disease.
XX
OS   Rana pipiens.
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08124.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 1; Page 55; 71pp; English.
XX
CC   The present sequence is Rana pipiens liver ribonuclease (RaPLR1)
CC   protein. Carboxy terminal end of RaPLR1 has a covalently bound
```

```
CC   ligand binding moiety, which can be a LL2 antibody directed against
CC   CD22 on cancerous B cells or human chorionic gonadotrophin (hCG)
CC   effective against Kaposi's Sarcoma cells. Recombinant ribonucleases can
CC   be expressed in bacteria without an N-terminal methionine due to the
CC   presence of a signal peptide that is cleaved by bacteria. The soluble
CC   expression of ribonuclease allows the proteins to be fused in-frame with
CC   ligand binding moieties to form cytotoxic fusion proteins. They can be
CC   used for treatment of cancer and autoimmune diseases.
XX
SQ   Sequence   104 AA;

  Query Match             98.5%;  Score 573;  DB 20;  Length 104;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-61;
  Matches  103;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 62
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61

Qy         63 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||
Db         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104


RESULT 6
AAY28879
ID   AAY28879 standard; Protein; 127 AA.
XX
AC   AAY28879;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Rana pipiens Clone 5a1b ribonuclease.
XX
KW   Rana pipiens ribonuclease Clone 5a1b; RaPLR1; covalently bound; RNase;
KW   LL2 antibody; ligand binding moiety; CD22; cancerous B cell; onconase;
KW   Kaposi's Sarcoma; human chorionic gonadotrophin; hCG; cancer;
KW   recombinant ribonuclease; frog; signal peptide; cytotoxic fusion protein;
KW   autoimmune disease.
XX
OS   Rana pipiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..23
FT                   /label= Signal_peptide
FT                   /note= "Putative"
FT   Protein         24..127
FT                   /label= Rana_pipiens_Clone_5a1b_ribonuclease
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08136.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Disclosure; Page 69; 71pp; English.
XX
CC   The present sequence is a Rana pipiens Clone 5a1b ribonuclease (RaPLR1).
CC   It is encoded by Clone 5a1b cDNA obtained from Rana pipiens liver mRNA
CC   library. It exhibits differences with Onconase (RTM) at amino acid
CC   residues 11, 20, 85 and 103. Carboxy terminal end of RaPLR1 has a
CC   covalently bound ligand binding moiety, which can be a LL2 antibody
CC   directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's Sarcoma cells. Recombinant
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
SQ   Sequence   127 AA;

  Query Match             98.5%;  Score 573;  DB 20;  Length 127;
  Best Local Similarity   100.0%;  Pred. No. 1.7e-61;
  Matches  103;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 62
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         25 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 84

Qy         63 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||
Db         85 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 127


RESULT 7
AAY28866
ID   AAY28866 standard; Protein; 104 AA.
XX
AC   AAY28866;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Recombinant RaPLR1 Met23Leu amino acid sequence.
XX
KW   Recombinant Rana pipiens ribonuclease; RaPLR1 Met23Leu; covalently bound;
KW   LL2 antibody; ligand binding moiety; CD22; cancerous B cell; RNase;
KW   Kaposi's sarcoma; human chorionic gonadotrophin; hCG; signal peptide;
KW   recombinant ribonuclease; cytotoxic fusion protein; cancer; frog;
KW   autoimmune disease.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 23
FT                   /note= "Wild type Met replaced with Leu"
XX
PN   WO9950398-A2.
XX
PD   07-OCT-1999.
XX
PF   26-MAR-1999;   99WO-US06641.
XX
PR   27-MAR-1998;   98US-0079751.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Newton DL,  Rybak SM;
XX
DR   WPI; 1999-610847/52.
DR   N-PSDB; AAZ08125.
XX
PT   New recombinant ribonucleases, used for killing target cells, e.g. for
PT   treating cancers, viral infections or autoimmune diseases -
XX
PS   Claim 34; Page 56; 71pp; English.
XX
CC   The present sequence is a recombinant Rana pipiens ribonuclease (RaPLR1)
CC   protein with Met23Leu. Carboxy terminal end of recombinant RaPLR1 has a
CC   covalently bound ligand binding moiety, which can be a LL2 antibody
CC   directed against CD22 on cancerous B cells or human chorionic
CC   gonadotrophin (hCG) effective against Kaposi's sarcoma cells. Recombinant
```

```
CC   ribonucleases can be expressed in bacteria without an N-terminal
CC   methionine due to the presence of a signal peptide that is cleaved by
CC   bacteria. The soluble expression of ribonuclease allows the proteins to
CC   be fused in-frame with ligand binding moieties to form cytotoxic fusion
CC   proteins. They can be used for treatment of cancer and autoimmune
CC   diseases.
XX
SQ   Sequence   104 AA;

  Query Match            97.9%;  Score 570;  DB 20;  Length 104;
  Best Local Similarity  99.0%;  Pred. No. 3.1e-61;
  Matches  102;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 62
              |||||||||||||||||||||:||||||||||||||||||||||||||||||||||||||
Db          2 DWLTFQKKHLTNTRDVDCNNILSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61

Qy         63 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||||||||||||||||||||||||
Db         62 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 104


RESULT 8
AAW35118
ID   AAW35118 standard; Protein; 112 AA.
XX
AC   AAW35118;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase protein NLSMetSerrOnc.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94955.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Claim 18; Page 63; 90pp; English.
XX
CC   AAW35115 to AAW35123 encode recombinant proteins (rOnc) which are
CC   modifications of the RNase Onconase (RTM) (nOnc). Such novel
CC   ribonuclease molecules are highly cytotoxic and can be used alone or to
CC   form chemical conjugates or to target recombinant immunofusions. They are
CC   used particularly for decreasing tumour cell growth. They can also be
CC   used for cell separation in vitro by selectively killing unwanted types
CC   of cells, e.g. in bone marrow prior to transplantation into a patient
CC   undergoing marrow ablation by radiation, or for killing leukaemia cells
CC   or T-cells that would cause graft versus host disease. The toxins can
CC   also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and also
CC   lower immunogenicity in humans.
XX
SQ   Sequence   112 AA;

  Query Match            96.2%;  Score 560;  DB 18;  Length 112;
  Best Local Similarity  96.2%;  Pred. No. 5.6e-60;
  Matches  101;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db          8 MSDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 67

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||||| |||||||||||||||| |
Db         68 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 112


RESULT 9
AAW35134
ID   AAW35134 standard; Protein; 251 AA.
XX
AC   AAW35134;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 10.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94972.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 76; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   251 AA;

  Query Match            96.2%;  Score 560;  DB 18;  Length 251;
  Best Local Similarity  96.2%;  Pred. No. 1.6e-59;
  Matches  101;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db        147 MSDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 206

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||||| |||||||||||||||| |
```

```
Db        207 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 251


RESULT 10
AAW35135
ID   AAW35135 standard; Protein; 254 AA.
XX
AC   AAW35135;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 11.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94973.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 77; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   254 AA;

  Query Match             96.2%;  Score 560;  DB 18;  Length 254;
  Best Local Similarity   96.2%;  Pred. No. 1.6e-59;
  Matches  101;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db          1 MSDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||||| |||||||||||||||| |
Db         61 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 105


RESULT 11
AAW35129
ID   AAW35129 standard; Protein; 355 AA.
XX
AC   AAW35129;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 5.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94967.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 71; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   355 AA;

  Query Match             96.2%;  Score 560;  DB 18;  Length 355;
  Best Local Similarity   96.2%;  Pred. No. 2.5e-59;
  Matches  101;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db        251 MSDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 310

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||||| |||||||||||||||| |
Db        311 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 355


RESULT 12
AAW35133
ID   AAW35133 standard; Protein; 355 AA.
XX
AC   AAW35133;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 9.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
```

```
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94971.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 75; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   355 AA;

  Query Match           96.2%;  Score 560;  DB 18;  Length 355;
  Best Local Similarity  96.2%;  Pred. No. 2.5e-59;
  Matches  101;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db          1 MSDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||||| |||||||||||||||| |
Db         61 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 105


RESULT 13
AAW35132
ID   AAW35132 standard; Protein; 366 AA.
XX
AC   AAW35132;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase rOnc fusion protein 8.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
OS   Synthetic.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94970.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Page 74; 90pp; English.
XX
CC   Sequences AAW35125 to AAW35135 represent recombinant fusion proteins
CC   (rOnc) which are modifications of the RNase Onconase (RTM) (nOnc). Such
CC   novel ribonuclease molecules are highly cytotoxic and can be used alone
CC   or to form chemical conjugates or to target recombinant immunofusions.
CC   They are used particularly for decreasing tumour cell growth. They can
CC   also be used for cell separation in vitro by selectively killing unwanted
CC   types of cells, e.g. in bone marrow prior to transplantation into a
CC   patient undergoing marrow ablation by radiation, or for killing leukaemia
CC   cells or T-cells that would cause graft versus host disease. The toxins
CC   can also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and
CC   also lower immunogenicity in humans.
XX
SQ   Sequence   366 AA;

  Query Match           96.2%;  Score 560;  DB 18;  Length 366;
  Best Local Similarity  96.2%;  Pred. No. 2.6e-59;
  Matches  101;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||||
Db        262 MSDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 321

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||||| |||||||||||||||| |
Db        322 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 366


RESULT 14
AAW06544
ID   AAW06544 standard; protein; 104 AA.
XX
AC   AAW06544;
XX
DT   22-AUG-1997  (first entry)
XX
DE   Antitumour protein from Rana pipiens oocytes.
XX
KW   Tumour; chemotherapy; radiotherapy; frog.
XX
OS   Rana pipiens.
XX
PN   WO9639428-A1.
XX
PD   12-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08304.
XX
PR   06-JUN-1995;   95US-0467955.
XX
PA   (ALFA-) ALFACELL CORP.
XX
PI   Ardelt WJ;
XX
DR   WPI; 1997-043063/04.
XX
PT   Antitumour proteins from Rana pipiens oocyte(s) - have fewer
PT   disadvantages than chemotherapy, surgery and radiotherapy
XX
PS   Claim 8; Page 28; 45pp; English.
XX
```

```
CC   The present sequence is a specifically claimed example of an
CC   antitumour protein from the generic protein in AAW18224, with the
CC   molecular weight 12000. This is one of two preferred proteins (the
CC   other in AAW06543) that have been isolated from Rana pipiens oocytes.
CC   Both proteins have a blocked amino terminal group and are essentially
CC   free of carbohydrates. The proteins are used to treat tumours. Use of
CC   the peptides has fewer disadvantages than chemotherapy, radiotherapy
CC   and surgery in the treatment of tumours.
XX
SQ   Sequence   104 AA;

  Query Match             95.5%;  Score 556;  DB 18;  Length 104;
  Best Local Similarity   97.1%;  Pred. No. 1.6e-59;
  Matches  100;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          3 DWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 62
              |||||||||:|||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 DWLTFQKKHVTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLTTS 61

Qy         63 EFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              ||||||||||||||||||||| |||||||||||||||| |
Db         62 EFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGRC 104


RESULT 15
AAW35123
ID   AAW35123 standard; Protein; 105 AA.
XX
AC   AAW35123;
XX
DT   20-APR-1998  (first entry)
XX
DE   R. pipiens recombinant RNase protein [Met-(-1)]rOnc.
XX
KW   RNase A; ribonuclease; cytotoxic; onconase; nOnc; immunofusion;
KW   tumour cell growth; frog.
XX
OS   Rana pipiens.
XX
PN   WO9731116-A2.
XX
PD   28-AUG-1997.
XX
PF   19-FEB-1997;   97WO-US02588.
XX
PR   21-FEB-1996;   96US-0011800.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Boque L,  Newton DL,  Rybak SM,  Wlodawer A;
XX
DR   WPI; 1997-435168/40.
DR   N-PSDB; AAT94959.
XX
PT   Ribonuclease molecules based on native Onconase - used for killing
PT   cells, particularly tumour cells
XX
PS   Disclosure; Pages 65-66; 90pp; English.
XX
CC   AAW35115 to AAW35123 encode recombinant proteins (rOnc) which are
CC   modifications of the RNase Onconase (RTM) (nOnc). Such novel
CC   ribonuclease molecules are highly cytotoxic and can be used alone or to
CC   form chemical conjugates or to target recombinant immunofusions. They are
CC   used particularly for decreasing tumour cell growth. They can also be
CC   used for cell separation in vitro by selectively killing unwanted types
CC   of cells, e.g. in bone marrow prior to transplantation into a patient
CC   undergoing marrow ablation by radiation, or for killing leukaemia cells
CC   or T-cells that would cause graft versus host disease. The toxins can
CC   also be used to selectively kill unwanted cells in culture. The new
CC   ribonucleases have increased cytotoxic activity compared to nOnc and also
CC   lower immunogenicity in humans.
XX
SQ   Sequence   105 AA;

  Query Match             95.5%;  Score 556;  DB 18;  Length 105;
  Best Local Similarity   95.2%;  Pred. No. 1.6e-59;
  Matches  100;  Conservative    2;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          1 MSDWLTFQKKHLTNTRDVDCNNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60
              | ||||||||||:||||||||:||||||||||||||||||||||||||||||||||||||
Db          1 MEDWLTFQKKHITNTRDVDCDNIMSTNLFHCKDKNTFIYSRPEPVKAICKGIIASKNVLT 60

Qy         61 TSEFYLSDCNVTSRPCKYKLKKSTNTFCVTCENQAPVHFVGVGHC 105
              |||||||||||||||||||||| |||||||||||||||| |
Db         61 TSEFYLSDCNVTSRPCKYKLKKSTNKFCVTCENQAPVHFVGVGSC 105


Search completed: June 25, 2003, 14:48:39
Job time : 32.5 secs
```